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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/500,991

01/13/2005

Julien Serre

6300-13

1891

30448

7590

10/31/2007

AKERMAN SENTERFITT

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EXAMINER

BROADHEAD, BRIAN J

ART UNIT

PAPER NUMBER

3664

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10/31/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/500,991	SERRE, JULIEN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Brian J. Broadhead	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6,7 and 9-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,7 and 9-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6, 7, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khavakh et al., 2004/0039520, in view of Ashby et al., 6038559.
3. Khavakh et al. disclose a cost is attributed to each segment of the network; a path graph is developed, substantially starting from at least one of the two points (A,B); and the minimal cost path which connects the two points (A,B) is determined, the method being characterized in that two path graphs are developed, substantially starting from two points (A,B) respectively; the development of the two graphs is interrupted when they comprise at least one first common interference node (Pi); the two minimal cost paths belonging respectively to the two graphs are determined; and the two minimal cost paths are connected in order to obtain the minimal cost path between the two points (A,B); and the two graphs are developed simultaneously in paragraphs 100 and 117; in the case when at least one of the points is substantially at the location of a node, the corresponding graph is developed starting from said node in paragraph 35; for at least one of the two points (A,B), at least two adjacent nodes (PA,n, PA,n+1) of the said point (A) are sought, a non-zero basic cost is attributed to each of these two nodes (PA,n, PA,n+1), and a single graph is developed starting from these two nodes (PA,n,

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$PA, n+1$ ) in paragraph 65-66; since the two nodes ( $PA, n$ ,  $PA, n+1$ ) form a segment on which the point (A) is substantially situated the basic cost of each node ( $PA, n$ ,  $PA, n+1$ ) is determined by proportionality starting from the cost of the segment between these two nodes ( $PA, n$ ,  $PA, n+1$ ) in paragraphs 65-66; the segments are classified according to a plurality of network levels; during the development of at least one of the two graphs, the number of segments of the graph which belong to the lowest level  $\min f$  is calculated; and starting from a predefined threshold of number of segments of level  $\min f$  the graph is developed taking into account only the segments which belong to the levels which are strictly higher than the level  $\min f$  in paragraphs 139, 153, and 154; during the development of the two graphs, the number of segments of each graph which belong to the lowest level  $\min f$  is calculated, and when the number of segments of level  $\min f$  has reached the said threshold for the two graphs, the development of the two graphs is continued, taking into account only the segments which belong to the levels which are strictly higher than the level  $\min f$  in paragraphs 139, 153, and 154; wherein, having found the said first common interference node ( $P_i$ ), the optimal interference node ( $P_{io}$ ) is sought from amongst the nodes already analyzed, in order to determine the two minimal cost paths which contain the optimal interference node ( $P_{io}$ ) in paragraph 117.

4. Khavakh et al. do not disclose wherein a group of successive segments within a given level  $m$  is sought, each group comprising exclusively intermediate nodes which do not belong to any other segment with a level which is at least equal to  $m$ , and the group of successive segments having the given level  $m$  is substituted by a single segment with the given level  $m$ .

5. Ashby et al. teach a group of successive segments within a given level  $m$  is sought, each group comprising exclusively intermediate nodes which do not belong to any other segment with a level which is at least equal to  $m$ , and the group of successive segments having the given level  $m$  is substituted by a single segment with the given level  $m$  on line 9, on column 14, through line 60, on column 18. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the groups of Ashby et al. in the invention of Khavakh et al. because such modification would speed up route calculation as stated on lines 22-23, on column 14 of Ashby et al.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Khavakh et al., 2004/0039520, in view of Ashby et al., 6038559, as applied to claim 1 above, and further in view of the admitted prior art.

7. Khavakh et al. and Ashby et al. disclose the limitations as set forth above. They do not explicitly disclose the graphs being developed in a globally concentric manner. The admitted prior art (lines 22-23, on page 1 of the specification) teaches that it is known to develop path graphs in a globally concentric manner. It would have been obvious to one of ordinary skill in the art to use the admitted prior art in the invention of Khavakh and Ashby because it would combine known prior art limitations and yield no unpredictable results.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Khavakh et al., 2004/0039520, in view of Ashby et al., 6038559, in further view of the admitted prior art as applied to claim 9 above, and further in view of Verstraete, 5170353.

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9. Blewitt discloses the limitations as set forth above. Blewitt does not disclose using a bucket algorithm. Verstraete teach using a bucket algorithm on lines 15-21, on column 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the bucket algorithm of Verstraete in the invention of Blewitt because such modification would provide a way to use weighting factors in the path determining process as disclosed on lines 55-65, on column 1.

10. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khavakh et al., 2004/0039520, in view of Ashby et al., 6038559, as applied to claim 1 above, and further in view of Gazis et al., 5610821.

11. Khavakh et al. and Ashby et al. disclose the limitations as set forth above. They do not disclose using a server with a communication block, a block for receiving requests from terminals, a block for road network data, classification of road segments, labeling segments, a calculation module for graph development detection of segment level changes, and minimal cost path determination, and a transmission block. Gazis et al. teaches using a server for route calculation instead of a terminal, using a server with a communication block, a block for receiving requests from terminals, a block for road network data, classification of road segments, labeling segments, a calculation module for graph development detection of segment level changes, and minimal cost path determination, and a transmission block on lines 1 on column 3, through line 48, on column 4. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a server system like Gazis et al. in the invention of Khavakh et al. and Ashby et al. because such modification would allow calculation of routes on

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non-static data and to have optimal use of the road network as stated on lines 13-16, on column 1, of Gazis et al.

### ***Response to Arguments***

12. Applicant's arguments filed 7-9-07 have been fully considered but they are not persuasive. The arguments begin by pointing out limitations that aren't taught by the individual cited prior art references, however, the applicant is only pointing out things that the rejections do not rely on. For example, applicant argues Khavakh does not disclose "searching for a group of successive segments...and the group of successive segments is substituted by a single segment with a level m "(page 9, second to last paragraph of arguments). Khavakh was never cited for teaching this limitation. There are several limitations argued this way. These arguments are not germane to the rejection. Applicant argues against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

13. Applicant does argue that Ashby does not teach substituting a group of successive segments of level m by a single segment of level m. Applicant is directed to lines 9-32, column 14.

14. Applicant also argues that the present invention provides a simple and fast method for determining the minimal cost path but the combination of the prior art fails to teach this. Applicant supports this by stating that the current invention relies on a "virtual network" instead of a physical road network and that Khavakh fails to teach this.

Khavakh was not cited for teaching this, Ashby was. Since “virtual network” isn’t claimed it is assumed that Applicant is again referring to replacing successive segments with a single segment that represents the series of segments. This teaching can be found in Ashby (lines 9-32, column 14).

15. In section “a)” of the arguments, Applicant again argues the references individually. The argument is not applicable since it fails to argue the combination used in the rejection.

16. In section “b)” of the arguments, Applicant states how Ashby uses his aggregate segment and stores the aggregate segments. Applicant also states that there is no substitution in Ashby during graph development. Ashby was cited solely for the teaching that several segments can be substituted with a single segment that represents all of those segments. How Ashby uses the substitute segment really isn’t important in reference to the current application. Even if this wasn’t the case, applicant’s arguments aren’t convincing since Ashby does explicitly teach replacing or substituting the aggregate segment into the route calculation thereby speeding up the process (see lines 41-52, on column 13). This directly contradicts applicant’s statement. The argument in sections “c)” and “d)” of applicant’s arguments are not convincing for the same reason as in section “b)”. Applicant’s is picking and choosing drawbacks of segment substitution (by the way, the same drawbacks that would be in applicant’s invention) and ignoring the advantages taught by Ashby. These advantages, including speeding up route calculation and shrinking database size (see



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lines 42-52, on column 13), would provide ample motivation for one of ordinary skill in the art at the time the invention was made to combine Ashby with Khavakh.

***Conclusion***

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Broadhead whose telephone number is 571-272-6957. The examiner can normally be reached on Tuesday through Friday.

19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Brian J. Broadhead  
Examiner  
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BJB

ok  
1/2/09

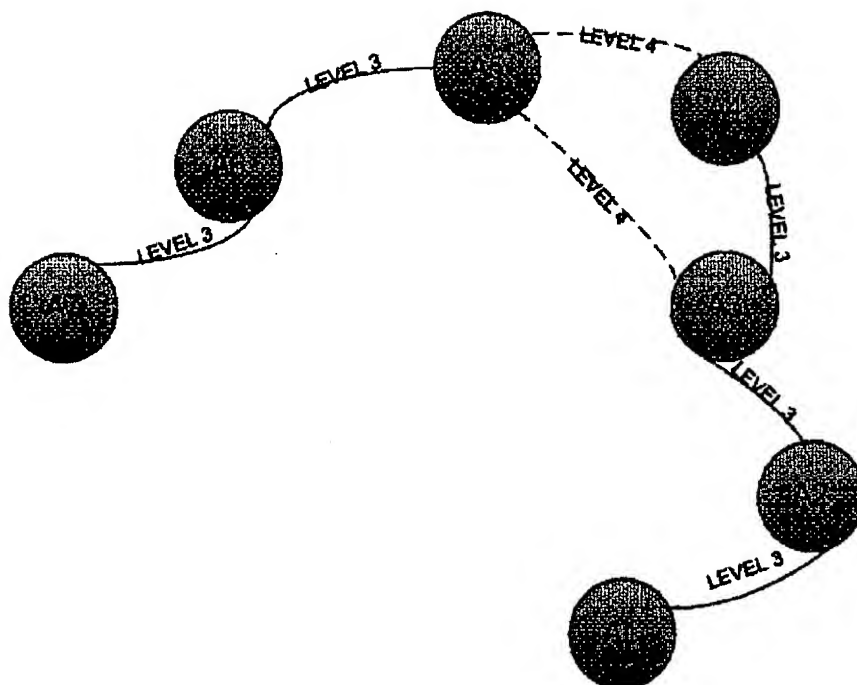


FIGURE 6

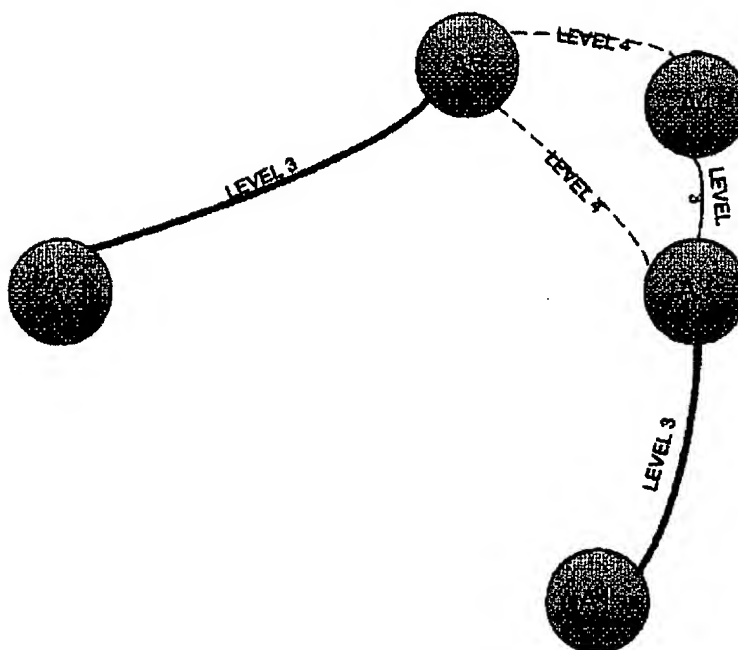


FIGURE 7